

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method, comprising: for
determining a plurality of filter coefficients for a digital filter for a Universal Mobile Telecommunication System (UMTS), ~~in which the filter coefficients are predetermined and modified in a filter design program, comprising the steps of the determining including:~~
dividing the ~~predetermined~~initial filter coefficients (b_k) by a ~~same~~ scaling factor (s), to result in a plurality of scaled filter coefficients (β_k);
quantizing the scaled filter coefficients (β_k) so that only a certain maximum number (n) of "1" bits are counted from a most significant bit onwards; ~~and in that~~
determining a respective quantization error of each quantized scaled filter coefficient is determined relative to a respective one of the predetermined initial filter coefficient coefficients; and
repeatedly modifying for a ~~predetermined~~ number of times the scaling factor (s) of a respective ~~and determining which scaling factor (s_k) being set~~ results in which the quantization error becomes a ~~predetermined~~ having minimal error value, and ~~in that~~
implementing in the filter the filter coefficients (β_k) having resulting in the minimal error are implemented in the filter value.
2. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein the number (n) comprises one of four, three, or two.
3. (Currently Amended) A method as claimed in claim 1, wherein ~~characterized in that~~ if again a "1" bit follows the last "1" bit, a rounding is effected from the last bit onwards.

4. (Currently Amended) A digital filter for a Universal Mobile Telecommunication System (UMTS), ~~in which the digital filter coefficients are processed with the signal, comprising~~

means for dividing a plurality of binary filter coefficients (b_n) by a scaling factor (s_n) to result in a plurality of scaled filter coefficients (β_n);

means for quantizing the scaled filter coefficients (β_n) so that they do not exceed a predetermined selected number (n) of "1" bits from a most significant bit onwards, in that, and

adder stages ~~ADD(3)~~ for processing the scaled and quantized filter coefficients (β_n) ~~with the an input signal.~~

5. (Currently Amended) The digital filter as claimed in claim 4, comprising a final stage ~~(4)~~ for processing an output signal by a factor (s_n) reciprocal to the scaling factor.

6. (Currently Amended) A digital filter as claimed in claim 4, characterized ~~in that wherein~~ each adder stage ~~(3)~~ comprises ~~n-1~~ adders ~~(9, 10, 11)~~ and a means for multiplying an input by 2^j by shifting the input by ~~i-(5, 6, 7, 8)~~, the input being a respective one of the scaled and quantized filter coefficients.

7. (Currently Amended) A digital filter as claimed in claim 4, characterized ~~in that in wherein~~ the adder stages ~~(3)~~ and a ~~number n~~ include first and second adder stages respectively including:

respective numbers of a multiplying means for multiplying an input by 2^j by shifting the input by ~~i-(5, 6, 7, 8)~~ is, wherein the respective numbers of multiplying means are different; and ~~the number~~

respective numbers of adders (9, 10, 11) is accordingly coupled to the respective multiplying means, wherein the respective numbers of adders are different.

8. (Currently Amended) A digital filter as claimed in claim 7, characterized ~~in that individual~~ wherein the adder stages (3) ~~have~~ include a third adder stage having only a single multiplying means ~~(5)~~ for multiplying an input by 2^j by shifting the input by i .

9. (Currently Amended) A digital filter as claimed in claim 4, characterized ~~in that the mean~~ wherein each adder stage comprises $n-1$ adders and means for multiplying an input by 2^j by shifting the input by i , the input being a respective one of the scaled and quantized filter coefficients, wherein each of the means for multiplying ~~(5, 6, 7, 8)~~ an the input by 2^j by shifting the input by i is formed by connections of its inputs and outputs of a multiplier stage.

10. (Currently Amended) A digital filter as claimed in claim 4, characterized ~~in that the~~ wherein each adder stage (3) comprises:

$n-1$ adders;

multiplying means for multiplying an input by 2^j by shifting the input by i , the input being a respective one of the scaled and quantized filter coefficients; and

a programmable selector (12) which in accordance with its programming connects the multiplying means for multiplying an input by 2^j by shifting the input by i (5, 6, 7, 8) with the adders (9, 11).

11. (Currently Amended) The method according to claim 1, further comprising

multiplying (5, 6, 7, 8) an input by 2^j by shifting the input by i with and summing shifted values using a plurality of adders (9, 11).

12. (Currently Amended) The method according to claim 1, further comprising:

multiplying an input by 2^j by shifting the input by i (5, 6, 7, 8), which is using a multiplier formed by connections of its inputs and outputs.

13. (Currently Amended) The method according to claim 11, wherein ~~adders stage (3) comprises the multiplying is performed using a plurality of multipliers, the method further comprising selectively connecting the multipliers with the adders using a programmable selector (12) which in accordance with its a programming connects the shifted input with the adders (9, 11).~~

14. (New) A method, comprising:
producing a plurality of scaled filter coefficients by dividing initial filter coefficients by a scaling factor;
quantizing the scaled filter coefficients so that only a certain maximum number (n) of "1" bits are counted from a most significant bit onwards;
determining respective quantization errors of the quantized scaled filter coefficients relative to the initial filter coefficients, respectively; and
modifying the scaling factor and determining which scaling factor results in a quantization error having minimal error value, and
implementing in the filter the filter coefficients resulting in the minimal error value.

15. (New) A method as claimed in claim 14, wherein the number (n) comprises one of four, three, or two.

16 (New) A method as claimed in claim 14, wherein if again a "1" bit follows the last "1" bit, a rounding is effected from the last bit onwards.

17. (New) The method according to claim 14, further comprising:
multiplying an input by 2^j by shifting the input by i using a multiplier formed by connections of inputs and outputs.

18. (New) The method according to claim 14, further comprising multiplying an input by 2^j by shifting the input by i and summing shifted values using a plurality of adders.

19. (New) The method according to claim 18, wherein the multiplying is performed using a plurality of multipliers, the method further comprising selectively connecting the multipliers with the adders using a programmable selector in accordance with a programming.